

this part, in non-refillable, non-metal containers not exceeding 120 mL (4 fluid ounces) each, or in non-refillable metal containers not exceeding 820 mL (28 ounces) each, except that flammable aerosols may not exceed 500 mL (16.9 ounces) each; or

(2) Liquids, in inner packagings not exceeding 500 mL (16.9 ounces) each; or

(3) Solids, in inner packagings not exceeding 500 g (1.0 pounds) each; or

(4) Any combination thereof.

(b) Inner packagings are to be placed in an outer packaging not to exceed 30 kg (66 pounds) gross weight as prepared for shipment.

[76 FR 3377, Jan. 19, 2011]

§ 173.168 Chemical oxygen generators.

An oxygen generator, chemical (defined in §171.8 of this subchapter) may be transported only under the following conditions:

(a) *Approval.* A chemical oxygen generator that is shipped with an explosive or non-explosive means of initiation attached must be classed and approved by the Associate Administrator in accordance with the procedures specified in § 173.56 of this subchapter.

(b) *Impact resistance.* A chemical oxygen generator, without any packaging, must be capable of withstanding a 1.8 meter drop onto a rigid, non-resilient, flat and horizontal surface, in the position most likely to cause actuation or loss of contents.

(c) *Protection against inadvertent actuation.* A chemical oxygen generator must incorporate one of the following means of preventing inadvertent actuation:

(1) A chemical oxygen generator that is not installed in protective breathing equipment (PBE):

(i) Mechanically actuated devices:

(A) Two pins, installed so that each is independently capable of preventing the actuator from striking the primer;

(B) One pin and one retaining ring, each installed so that each is independently capable of preventing the actuator from striking the primer; or

(C) A cover securely installed over the primer and a pin installed so as to prevent the actuator from striking the primer and cover.

(ii) Electrically actuated devices: The electrical leads must be mechani-

cally shorted and the mechanical short must be shielded in metal foil.

(iii) Devices with a primer but no actuator: A chemical oxygen generator that has a primer but no actuating mechanism must have a protective cover over the primer to prevent actuation from external impact.

(2) A chemical oxygen generator installed in a PBE must contain a pin installed so as to prevent the actuator from striking the primer, and be placed in a protective bag, pouch, case or cover such that the protective breathing equipment is fully enclosed in such a manner that the protective bag, pouch, case or cover prevents unintentional actuation of the oxygen generator.

(d) *Packaging.* A chemical oxygen generator and a chemical oxygen generator installed in equipment, (e.g., a PBE) must be placed in a rigid outer packaging that—

(1) Conforms to the requirements of either:

(i) Part 178, subparts L and M, of this subchapter at the Packing Group I or II performance level; or

(ii) The performance criteria in Air Transport Association (ATA) Specification No. 300 for a Category I Shipping Container.

(2) With its contents, is capable of meeting the following additional requirements when transported by cargo-only aircraft:

(i) The Flame Penetration Resistance Test specified in Appendix E to part 178 of this subchapter.

(ii) The Thermal Resistance Test specified in Appendix D to part 178 of this subchapter.

(e) *Equipment marking.* The outside surface of a chemical oxygen generator must be marked to indicate the presence of an oxygen generator (e.g., “oxygen generator, chemical”). The outside surface of equipment containing a chemical oxygen generator that is not readily apparent (e.g., a sealed passenger service unit) must be clearly marked to indicate the presence of the oxygen generator (example: “Oxygen Generator Inside”).

(f) *Items forbidden in air transportation.* (1) A chemical oxygen generator is forbidden for transportation on board a passenger-carrying aircraft.

(2) A chemical oxygen generator is forbidden for transportation by both passenger-carrying and cargo-only aircraft after:

- (i) The manufacturer's expiration date; or
- (ii) The contents of the generator have been expended.

[72 FR 4455, Jan. 31, 2007, as amended at 72 FR 55097, Sept. 28, 2007; 74 FR 2259, Jan. 14, 2009; 74 FR 53188, Oct. 16, 2009; 76 FR 56316, Sept. 13, 2011]

§ 173.170 Black powder for small arms.

Black powder for small arms that has been classed in Division 1.1 may be reclassified as a Division 4.1 material, for domestic transportation by motor vehicle, rail freight, and cargo vessel only, subject to the following conditions:

(a) The powder must be examined and approved for Division 1.1 and Division 4.1 classification in accordance with §§ 173.56 and 173.58;

(b) The total quantity of black powder in one motor vehicle, rail car, or freight container may not exceed 45.4 kg (100 pounds) net mass, and no more than four freight containers may be on board one cargo vessel;

(c) The black powder must be packed in inner metal or heavy wall conductive plastic receptacles not over 454 g (16 ounces) net capacity each, with no more than 25 cans in one outer UN 4G fiberboard box. The inner packagings must be arranged and protected so as to prevent simultaneous ignition of the contents. The complete package must be of the same type which has been examined as required in § 173.56;

(d) Each completed package must be marked "BLACK POWDER FOR SMALL ARMS" and "NA 0027"; and

(e) Each package must bear the FLAMMABLE SOLID label.

[Amdt. 173-255, 61 FR 50626, Sept. 26, 1996, as amended at Amdt. 173-255, 62 FR 14338, Mar. 26, 1997]

§ 173.171 Smokeless powder for small arms.

Smokeless powder for small arms which has been classed in Division 1.3 may be reclassified in Division 4.1, for domestic transportation by motor vehicle, rail car, vessel, or cargo-only air-

craft, subject to the following conditions:

(a) The powder must be examined and approved for a Division 1.3 and Division 4.1 classification in accordance with §§ 173.56 and 173.58 of this part.

(b) The total quantity of smokeless powder may not exceed 45.4 kg (100 pounds) net mass in:

(1) One rail car, motor vehicle, or cargo-only aircraft; or

(2) One freight container on a vessel, not to exceed four freight containers per vessel.

(c) Only combination packagings with inner packagings not exceeding 3.6 kg (8 pounds) net mass are authorized. Inner packagings must be arranged and protected so as to prevent simultaneous ignition of the contents. The complete package must be of the same type which has been examined as required in § 173.56 of this part.

(d) Inside packages that have been examined and approved by the Associate Administrator may be packaged in UN 4G fiberboard boxes meeting the Packing Group I performance level, provided all inside containers are packed to prevent shifting and the net weight of smokeless powder in any one box does not exceed 7.3 kg (16 pounds).

[Amdt. 173-224, 55 FR 52643, Dec. 21, 1990, as amended at 56 FR 66270, Dec. 20, 1991; Amdt. 173-241, 59 FR 67509, Dec. 29, 1994; Amdt. 173-253, 61 FR 27174, May 30, 1996; 66 FR 45379, Aug. 28, 2001; 68 FR 61941, Oct. 30, 2003; 75 FR 53597, Sept. 1, 2010]

§ 173.172 Aircraft hydraulic power unit fuel tank.

Aircraft hydraulic power unit fuel tanks containing a mixture of anhydrous hydrazine and monomethyl hydrazine (M86 fuel) and designed for installation as complete units in aircraft are excepted from the specification packaging requirements of this subchapter when they conform to either of the following conditions:

(a) The unit must consist of an aluminum pressure vessel made from tubing and having welded heads. Primary containment of the fuel within this vessel must consist of a welded aluminum bladder having a maximum internal volume of 46 L (12 gallons). The outer vessel must have a minimum design gauge pressure of 1,275 kPa (185